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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,368	12/22/2003	S. Unnikrishna Pillai		7966

7590 09/14/2005

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EXAMINER

BARKER, MATTHEW M

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/743,368

Applicant(s)

PILLAI, S. UNNIKRISHNA

Examiner

Matthew M. Barker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☒ Claim(s) 16, 17, and 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-11, drawn to the apparatus and method of using the apparatus, classified in class 342, subclass 90.
 - II. Claims 12-22, drawn to the method of making the apparatus, classified in class 342, subclass 165.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and process of using/product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by a materially different process such as omitting the optimization steps.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
3. During a telephone conversation with Walter Tencza on August 30, 2005 a provisional election was made with traverse to prosecute the invention of II, claims 12-22. Affirmation of this election must be made by applicant in replying to this Office

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action. Claims 1-11 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Information Disclosure Statement

4. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Objections

5. Claim 16 is objected to because of the following informalities: Line 1 contains the phrase "the method of claim 2". For the purposes of examination the claim is read as -- the method of claim 12--. Appropriate correction is required.

6. Claim 17 is objected to because of the following informalities: Line 12 contains the wording "for a corresponding to a plurality". For the purposes of examination the claim is read without the words "for a". Appropriate correction is required.

7. Claim 20 is objected to because of the following informalities: Lines 2 and 3 contain reference to "the multidimensional display vector". This wording is inconsistent with previous instances of a "multidimensional vector" in the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

9. Claims 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Pillai et al.

Regarding claim 12, Pillai et al. discloses the claimed method of optimally selecting a transmit signal and bank of receivers. See Introduction, paragraphs 1 and 4.

Regarding claim 13, Pillai et al. discloses a method of selecting multiple receivers (see Target Identification Problem, lines 5-6), each minimizing clutter and noise signals. (Introduction, paragraph 2)

Regarding claim 14, Pillai et al. discloses that one target in a given pool is present. (Target Identification Problem, lines 1-3)

Regarding claim 15, Pillai et al. discloses the claimed method using the power spectra of the clutter and noise signals. (Introduction, paragraph 2)

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pillai et al. in view of Lemelson.

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Lamelson discloses a display using target data with multidimensional visualization for corresponding target location (paragraph 90, lines 13-19).

It would have been obvious to modify Pillai et al. to include a display as taught by Lamelson in order to allow the user to visually locate targets.

12. Claims 17, 18, 19, 20, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pillai et al. in view of Lemelson as applied to claim 16 above, and further in view of Pearson.

Pillai et al. discloses each receiver has an input and output. (Target Detection Problem Formulation, paragraph 2)

Pearson discloses an apparatus for calibrating and testing radar equipment, which produces signals corresponding to different radar targets (column 1). These target signals are input signals for receivers. The plurality of output signals of the bank of receivers of Pillai et al. for each target only input constitute a test multidimensional vector. It would have been obvious to further modify Pillai to use the apparatus of Pearson in order to perform proper calibration.

Regarding claims 18 and 19, the claimed method of receiving an unknown target signal and comparing the resultant multidimensional vector to the test multidimensional vector from the previous step to determine which target is present is the obvious method of calibration and testing to be performed with the apparatus of Pearson.

Regarding claim 20, the multidimensional vector inherently has the same number of items as targets in the target pool, as there is one receiver for each target in the pool

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(see Target Identification Problem) and the multidimensional vector consists of the receiver outputs.

Regarding claims 21 and 22, Lamelson discloses the display may be in two dimensional format or three dimensional format.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schmid et al., Guerri, Gjessing et al., Grieve et al., and Minker et al. relate to target identification using radar. Erle, Fey et al., and Vencel et al. relate to radar calibration and testing.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew M. Barker whose telephone number is (571)272-3103. The examiner can normally be reached on M-F, 8:30 AM-5:00 PM.

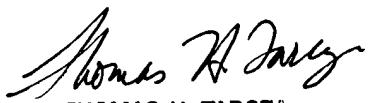
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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